

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

SOL IP, LLC,  
*Plaintiff,*

v.

AT&T MOBILITY LLC,  
*Defendant.*

v.

SPRINT COMMUNICATIONS CO L.P.,  
SPRINT SOLUTIONS, INC., and  
SPRINT SPECTRUM L.P.,  
*Defendants.*

v.

CELLCO PARTNERSHIP d/b/a/ VERIZON  
WIRELESS,  
*Defendants.*

v.

ERICSSON INC.,  
*Intervenor.*

Civil Action No. 2:18-cv-00526-RWS-RSP

***CONSOLIDATED LEAD CASE***

**JURY TRIAL DEMANDED**

Civil Action No. 2:18-cv-00527-RWS-RSP

Civil Action No. 2:18-cv-00528-RWS-RSP

**SOL IP'S REPLY CLAIM CONSTRUCTION BRIEF  
FOR "LTE GROUP A" PATENTS**

## TABLE OF CONTENTS

<b>I.</b>	<b>INTRODUCTION.....</b>	<b>1</b>
<b>II.</b>	<b>REPLY ARGUMENT .....</b>	<b>1</b>
A.	Paging Patents .....	1
1.	“Radio resource channel” .....	1
2.	“Downlink shared channel” terms .....	2
3.	“Scheduling identifiers” terms .....	3
4.	“The first signal” .....	6
B.	Random Access Patents .....	7
1.	“The scheduling ID is specific for the mobile station and identification for random access procedure” .....	7
2.	“Random access preamble” terms .....	7
3.	“The identifier is determined based on a resource region for random access, the resource region being expressed in a frequency and time” .....	8
C.	Carrier Aggregation Patents.....	9
1.	“Index” terms .....	9

## **TABLE OF AUTHORITIES**

### **CASES**

<i>Abbott Labs. v. Sandoz, Inc.</i> , 566 F.3d 1282 (Fed. Cir. 2009).....	4
<i>Creative Integrated Sys., Inc. v. Nintendo of Am., Inc.</i> , 526 F. App’x 927 (Fed. Cir. 2013) .....	5
<i>CSB-System Int’l Inc. v. SAP America, Inc.</i> , 864 F.Supp.2d 335 (E.D. Pa. 2012) .....	7
<i>Ericsson Inc. v. TCL Commc’n Tech. Holdings, Ltd.</i> , 161 F. Supp. 3d 438 (E.D. Tex. 2015).....	6
<i>Forest Labs., LLC v. Sigmapharm Labs.</i> , LLC, 918 F.3d 928 (Fed. Cir. 2019) .....	5
<i>iFLY Holdings LLC v. Indoor Skydiving Germany GmbH</i> , No. 2:14-cv-1080-JRG-RSP, 2016 WL 1171021 (E.D. Tex. Mar. 25, 2016) .....	3
<i>InterDigital Commc’ns, LLC v. Int’l Trade Comm’n</i> , 690 F.3d 1318 (Fed. Cir. 2012).....	2
<i>Liebel-Flarsheim Co. v. Medrad, Inc.</i> , 358 F.3d 898 (Fed. Cir. 2004).....	3, 6

## **I. INTRODUCTION**

For claim term after claim term, defendants ignore that the disputed terms have either a clear facial meaning or a plain meaning to a person of ordinary skill in the art. In the face of what the claims clearly mean, defendants offer strained arguments attempting to limit the claims to a disclosed embodiment or—without any effort to satisfy their burden of proof—to render the claims indefinite. The Court should reject defendants’ arguments.

## **II. REPLY ARGUMENT**

### **A. Paging Patents**

#### **1. *“Radio resource channel”***

Defendants offer no coherent argument about “radio resource channel.” Indeed, after Sol IP filed its opening brief, defendants have abandoned their expert’s core argument that Sol IP’s construction “would also encompass at least the ‘control channel.’” *See* Roy Decl. ¶ 38 *et seq.*

This term has a plain meaning, and defendants offer no arguments undermining that. Defendants’ brief does not dispute that a “channel” is a path for transmitting signals. *See* Dkt. No. 205, at 5. Thus, a “radio resource channel” is literally a channel where that path consists of radio resources—that is, a channel transmitted over radio resources. Defendants’ own arguments validate this. Dkt. No. 226, at 13 (“[I]t is known in the art that a physical channel is transmitted ‘over radio resources.’”). Alternatively, the term may be construed based on the explicit requirements of the claim. Defendants agree “radio resource channel” must be a physical channel; their only complaint is that this is a separately stated claim requirement. *Id.* at 14. And defendants cannot dispute that this channel is shared by the paging channel and downlink shared channel; their only complaint is that the specification does not use the word “shared” to describe such sharing. *Id.* at 18.

Defendants argue that the specification does not use the term “radio resource channel.” But this does not make the term indefinite, as it has a plain meaning. There is no requirement that claims use the *same* words as the written description. Finally, defendants suggest that the prosecution history reflects “uncertainty” about the term’s meaning. It does not.<sup>1</sup> In any event, this argument misses the point because defendants do not argue any statements during prosecution amount to a disclaimer of scope.

## 2. “Downlink shared channel” terms

Defendants agree that a “downlink shared channel” is, as Sol IP proposes, a “shared channel used for downlink.” The only dispute is whether it should be further limited to a particular channel in the LTE standard known as DL-SCH.<sup>2</sup> Defendants offer no legitimate grounds for doing so. Sol IP’s construction is the clear meaning of the term, and defendants make no lexicography or disclaimer argument, so that should be the end of the story. *InterDigital Commc’ns, LLC v. Int’l Trade Comm’n*, 690 F.3d 1318, 1324 (Fed. Cir. 2012) (“The plain meaning of claim language ordinarily controls unless the patentee acts as his own lexicographer and provides a special definition for a particular claim term or the patentee disavows the ordinary scope of a claim term either in the specification or during prosecution.”).

Defendants’ *sole* basis for their construction is that the specification states, in a paragraph beginning with “*In the present embodiment*,” that “downlink shared channel (DL-SCH) information . . . is transmitted . . . .” ’814 Patent 5:9–21. In other words, they seek to limit the

---

<sup>1</sup> Defendants’ own analysis indicates (correctly) that neither item in the parenthetical “(12, radio frame)” is the “radio resource channel.” Dkt. No. 226, at 15–18. Rather, the parenthetical reflects that the PCH paging channel is mapped to a physical channel, to which the radio resource channel also may be mapped. Wells Decl. ¶¶ 48–50.

<sup>2</sup> Defendants misframe the issue as whether “a transport channel[] can also be a physical channel.” Dkt. No. 226, at 9. The actual dispute is obviously whether the “downlink shared channel” is limited to a transport channel at all.

invention to the disclosed embodiment, which is “improper . . . even if it is the only embodiment.” *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 913 (Fed. Cir. 2004). *Kopykake* is inapposite because the claims here do not recite “DL-SCH,” but rather “downlink shared channel,” meaning the claims always included **any** downlink shared channel and not just the **transport** downlink shared channel DL-SCH. As Dr. Wells notes, other LTE downlink shared channels were known, including PDSCH (**physical** downlink shared channel). Wells Rebuttal Decl. ¶ 31. The other cases defendants cite are inapposite because the claims cannot be limited to what the specification expressly describes as “the present embodiment.”

### 3. “Scheduling identifiers” terms

Defendants’ construction of “scheduling identifiers” is unsupported by and contrary to the specification. Defendants argue it is “explicitly defined” but only point to a single use of the (oft-confused) shorthand “i.e.” in support. While *Edwards Lifesciences* agreed with a lower court’s reasoning in that case, “i.e.” is not a magic incantation. Courts, including in this district, have not been so persuaded by “i.e.” as to ignore the balance of evidence in support of a term’s construction. *See, e.g., iFLY Holdings LLC v. Indoor Skydiving Germany GmbH*, No. 2:14-cv-1080-JRG-RSP, 2016 WL 1171021, at \*2 (E.D. Tex. Mar. 25, 2016) (declining to construe “above” as “downstream” for patent disclosing “fans located above, i.e. downstream of, the flight chamber”).<sup>3</sup> Moreover, the original Korean priority application—which is part of both the

---

<sup>3</sup> *Cf. Koninklijke KPN N.V. v. Samsung Elecs. Co., Ltd.*, No. 2:14-CV-1165-JRG, 2016 WL 2610649, at \*38 (E.D. Tex. May 6, 2016) (“The Court need not resolve whether this use of ‘i.e.’ gives rise to an express definition, however, because the above-cited claim recitals and specification disclosures sufficiently support Defendants’ proposed interpretation.”).

patent specification and prosecution history<sup>4</sup>—used the Korean word meaning “*for example*” in the parenthetical defendants rely upon, according to the certified translation below:

The above-mentioned group identifier is used by reserving and allocating a part of a scheduling identifier (*for example*, a cell radio network temporary identifier (C-RNTI)) for uniquely identifying a random terminal, and a random base station may operate by reserving a plurality of scheduling identifiers.

Declaration of Dr. Huang Gao ¶ 3 (emphasis added); *id.* ¶ 4; Shih Reply Decl. ¶¶ 2–3 & Ex. A13 (showing definition of applicable Korean word as “an instance; an example; an illustration”). Thus, a POSITA would *not* view “i.e.” as supporting defendants’ construction.

Other parts of the specification confirm defendants’ construction is wrong. The specification refers to an identifier for “identifying a specific terminal or a terminal group.” ’814 Patent 5:53–55. If the scheduling identifier were limited to C-RNTI, this would be impossible. *See* Wells Rebuttal Decl. ¶¶ 44–45. Defendants’ expert admits that defendants’ proposed construction results in an identifier of only a specific terminal: “A C-RNTI provides a *unique UE identification* at the cell level.” Roy Decl. ¶ 64 (emphasis added). Therefore, C-RNTI cannot be the only RNTI contemplated as a “scheduling identifier,” as the term must allow for identifying “a terminal group.”<sup>5</sup>

In addition, dependent claims show defendants’ construction to be wrong. *E.g.*, ’814 Patent claim 18; ’066 Patent claim 12 (requiring the scheduling identifiers to be RNTIs). Defendants complain that the dependent claims were added by amendment. But they ignore that

---

<sup>4</sup> ’066 Patent 1:13 (referring to “Korean Application Nos. 10-2006-0037522 and 10-2007-0038849 . . . , the entire contents of which are incorporated herein by reference”); *Abbott Labs. v. Sandoz, Inc.*, 566 F.3d 1282, 1290 (Fed. Cir. 2009) (finding that “[the foreign] application is part of the prosecution history”).

<sup>5</sup> Defendants’ attempt to divine meaning from the prosecution history fails. *See* Dkt. No. 226, at 4–5. The applicant’s statement that “the use of the C-RNTI indicates that the scheduling information instead of paging indicator is allocated in the DSCCH” does not refer to “scheduling identifier,” and certainly is not an “unmistakable” disclaimer relating to that term.

the first recitation of “scheduling identifiers” was also added *by the same amendment*.<sup>6</sup> Defs. Ex. A3, at 3–4. This proves that “scheduling identifiers” in the broader claims was not intended to be limited even to RNTIs, let alone to C-RNTIs.

Defendants’ argument that Sol IP’s construction would “eviscerate the concept of scheduling” from the term is nonsense. Sol IP simply proposes that the term be given a construction of “plain and ordinary meaning.” The specification language defendants rely on states that the “scheduling ID is an ID for identifying a specific terminal or a terminal group between the terminal and the scheduler of the base station.” Dkt. No. 226, at 4. Defendants do not suggest—because they cannot—that Sol IP’s infringement contentions rely on scheduling identifiers that are not for this purpose. By comparison, defendants’ proposal would remove the term entirely and replace it with “C-RNTI.” This proposal “eviscerates” the term’s clear meaning.

Defendants’ arguments regarding the full phrase with the disputed term (“the identifier is used by reserving and allocating a part of scheduling identifiers”) are also unpersuasive. The cases defendants cite only show that a description may be limiting when it “describes the features of the ‘present invention’ *as a whole*.” *Forest Labs., LLC v. Sigmapharm Labs., LLC*, 918 F.3d 928, 933 (Fed. Cir. 2019) (emphasis added); *Creative Integrated Sys., Inc. v. Nintendo of Am., Inc.*, 526 F. App’x 927, 933 (Fed. Cir. 2013) (“But this principle has no application where, as here, the other statements and illustrations make it clear that the limitations *do not* describe the invention *as a whole*.” (emphases added)). There is no suggestion that the language defendants point to describes the invention as a whole. To the contrary, that language is in

---

<sup>6</sup> *Cave Consulting* is therefore inapposite. Moreover, that case found differentiation arguments based on later-added claims could not overcome “the specification’s consistently limiting description.” Here, the specification does *not* limit “scheduling identifiers” as defendants propose.



reference to Figure 5, which is expressly described as showing “a group identifier . . . in accordance with *an embodiment of the present invention*.” ’814 Patent 3:10–12. Defendants’ argument is nothing more than an “improper [attempt] to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims.” *Ericsson Inc. v. TCL Commc’n Tech. Holdings, Ltd.*, 161 F. Supp. 3d 438, 444 (E.D. Tex. 2015) (quoting *Liebel–Flarsheim*, 358 F.3d at 913). Finally, defendants’ argument that “scheduling identifier” is “never plural in the specification” is beside the point because the claim language—“scheduling identifiers”—is plural.

#### 4. “The first signal”

Defendants cannot (and do not) deny that “a POSITA would understand that ‘information’ in a data transmission may also be referred to as a ‘signal.’” *See* Dkt. No. 205, at 12; Wells Decl. ¶ 78. Accordingly, “the first signal” has a clear meaning: “the first information.” Defendants offer no plausible alternative construction, and their discussion of the prosecution history points to no disclaimer. As a result, the clear meaning should be adopted.

Defendants mischaracterize Sol IP’s position as asking the Court to redraft the claim. Dkt. No. 226, at 12–13. Not so. Sol IP’s construction reflects the plain and ordinary meaning of the claim to a POSITA. While the applicant could have used the same word to refer to the antecedent, the cases Sol IP cites (*KAIST IP* and *BASCOM*)—which defendants do not address, let alone distinguish—make clear that this is not required and that ordinary principles of claim construction (as opposed to redrafting) can resolve the dispute.

**B. Random Access Patents**

**1. “The scheduling ID is specific for the mobile station and identification for random access procedure”**

While this phrase could have been drafted more clearly, it conveys that (1) the scheduling ID is specific for the mobile station and (2) the scheduling ID is an identification for a random access procedure. Substituting “identifies” (or adding an “is” before “identification”) would have been more grammatically pleasing, but the question is whether the term is not reasonably amenable to construction. *CSB-System Int’l Inc. v. SAP America, Inc.*, 864 F.Supp.2d 335, 351 (E.D. Pa. 2012) (“While, again, the Court remarks on the inept use of language in these claims, such grammatical clumsiness and poor word choices do not constitute grounds for finding indefiniteness, particularly in view of the Federal Circuit’s mandate that indefiniteness be proven by clear and convincing evidence.”).

The claim is not indefinite because the alternative interpretation posited by defendants—that the scheduling ID is “specific” to the “identification for random access procedure”—is not supported by the specification. The specification consistently relates the scheduling ID to the mobile station. Wells Rebuttal Decl. ¶13. Defendants cite one sentence relating scheduling IDs to preambles, Dkt. No. 226, at 19, but “preambles” are not mentioned in the disputed phrase. In any event, preambles are used as part of random access procedures, so that sentence reinforces the only plausible reading of this claim term—that the scheduling ID is used in the random access procedure. Wells Rebuttal Decl. ¶ 15.

**2. “Random access preamble” terms**

The parties seem to agree that “own random access preamble” is a preamble for a specific terminal. Defendants wish to further limit “own” to mean “not shared with other equipment,” but that is not clearly required by the record. However, defendants’ construction would be fine if it

were fully specified. But defendants want to keep the phrase ambiguous as to the applicable universe of “other equipment.” If not limited to the context of the claim—performing random access between a terminal and a base station—then this language becomes a “nose of wax.” Defendants might argue the preamble must be globally unique (even outside the relevant cell) or cannot be reused after the random access process is over, even though neither argument would be supported by the specification. Defendants’ construction must be properly limited to “not shared with other equipment *performing random access with the same base station at the same time.*”

As for “the single random access preamble,” defendants argue that it must be something different than “own random access preamble.” Dkt. No. 226, at 22–23. Not so. The article “the” plainly suggests that “the single random access preamble” has an antecedent basis, and the only plausible antecedent is “own random access preamble.” The file history confirms that the said random access preamble is a terminal’s own and singular preamble. Wells Decl. ¶¶ 167–69.

The interview summary defendants quote does not support their position. *See* Dkt. No. 226, at 24. As discussed in Sol IP’s opening brief and by Dr. Wells, this summary supports Sol IP’s position. As the interview and subsequent prosecution show, the applicant clarified that the preamble is singular *and* is a terminal’s own preamble. Wells Decl. ¶ 169. In other words, a POSITA would understand from this that the preamble had *both* characteristics. As such, “the preamble” in “the single random access preamble” is necessarily the “own random access preamble” referenced earlier in the claims.

3. ***“The identifier is determined based on a resource region for random access, the resource region being expressed in a frequency and time”***

Defendants raise two arguments to justify limiting “the identifier” in this phrase to a “group scheduling identifier.” Both fail. *First*, defendants argue the specification often describes an identifier that is based on this sort of resource region as a “group scheduling identifier.” Dkt.

No. 226, at 20–21. This is nothing more than an attempt to import a specific embodiment into the construction of this phrase. *Second*, defendants argue that the applicant distinguished the Park reference by supposedly equating the claimed “identifier” with a “group scheduling identifier.” But they offer no response to Sol IP’s points in its opening brief refuting this argument. *See* Dkt. No. 205, at 24. The prosecution record does not reflect a clear and unequivocal disclaimer of claim scope.

Defendants also fail to respond properly to Sol IP’s argument that defendants’ construction would introduce confusion into the claim. Claim 1 uses the term “identifier” three times, yet defendants propose to define *only the third* instance as a “group scheduling identifier.” Defendants assert that the other “identifiers” in the claim would likewise be “group scheduling identifiers.” Defs. Br. at 22. But there is zero textual or other support for construing the first instance of “an identifier” as a “group scheduling identifier,” and the term “an identifier” is not before the Court for construction. In the disputed phrase, “the identifier” is a proform—a word that takes meaning from an antecedent (“an identifier”)—but defendants are proposing to turn grammar on its head and define an antecedent *based on its proform*. The Court should reject such flawed logic.

### C. Carrier Aggregation Patents

#### 1. “Index” terms

Defendants’ argument is an exercise in claim-construction absurdism. Defendants focus solely on the disputed terms, blinding themselves to the “adjacent” and “not adjacent” limitations *in the same claims*, and call the terms indefinite because they cannot tell which table is being referenced. Then they claim the ambiguity is “exacerbated” by those limitations because no table is referenced. Defendants fail to consider the record evidence as a whole; indeed, they do not even view *each claim* as a whole.

Defendants find ambiguity in the fact that there are “at least nine tables in the specification,” Dkt. No. 226, at 26, ignoring that the relevant ones are *in the claims themselves*. And the requirements of adjacency and non-adjacency fully specify which table the indexes in the disputed terms must come from. Dkt. No. 205, at 27–28.

DATED: November 13, 2019

Respectfully submitted,

By: /s/ Daniel J. Shih

Max L. Tribble Jr.

Texas State Bar No. 20213950

mtribble@susmangodfrey.com

Joseph S. Grinstein

Texas State Bar No. 24002188

jgrinstein@susmangodfrey.com

Rocco Magni

Texas State Bar No. 24092745

rmagni@susmangodfrey.com

Bryce T. Barcelo

Texas State Bar No. 24092081

bbarcelo@susmangodfrey.com

**SUSMAN GODFREY LLP**

1000 Louisiana Street, Suite 5100

Houston, TX 77002

Telephone: (713) 651-9366

Facsimile: (713) 654-6666

Kalpana Srinivasan

California State Bar No. 237460

ksrinivasan@susmangodfrey.com

Kathryn P. Hoek

California State Bar No. 219247

khoek@susmangodfrey.com

Oleg Elkhunovich

California State Bar No. 269238

oelkhunovich@susmangodfrey.com

**SUSMAN GODFREY LLP**

1900 Avenue of the Stars, Suite 1400

Los Angeles, CA 90067

Telephone: (310) 789-3100

Facsimile: (310) 789-3150

Daniel J. Shih  
Washington State Bar No. 37999  
dshih@susmangodfrey.com  
**SUSMAN GODFREY LLP**  
1201 Third Avenue, Suite 3800  
Seattle, Washington 98101  
Telephone: (206) 516-3880  
Facsimile: (206) 516-3883

S. Calvin Capshaw  
Texas State Bar No. 03783900  
ccapshaw@capshawlaw.com  
Elizabeth L. DeRieux  
Texas State Bar No. 05770585  
ederieux@capshawlaw.com  
**CAPSHAW DERIEUX LLP**  
114 East Commerce Avenue  
Gladewater, TX 75647  
Telephone: (903) 845-5770

Seong Jun Park  
edward.park@fidelis-laws.com  
**FIDELIS LAW GROUP PLLC**  
444 W Broad St Unit 426  
Falls Church, VA 22046  
Telephone: (571) 310-2302

**ATTORNEYS FOR PLAINTIFF  
SOL IP, LLC**

**CERTIFICATE OF SERVICE**

I hereby certify that on November 13, 2019, all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via the Court's CM/ECF system.

/s/ Daniel J. Shih  
Daniel J. Shih